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said coating member being arranged to contact said operation member and support said operation member in the predetermined direction,

said detection unit being arranged to contact said outer surface portion of said operation member, and

said stopper being located closer to a center of said operation member than said detection unit.

29. The input apparatus of claim 28, wherein said stopper adjoins said detection unit.

30. The input apparatus of claim 28, wherein said operation member is a foot panel on which a player is able to stamp.--

### REMARKS

Claims 1, 4-9, 11-16, 18, 19 and 21-26 remain in this application. Claims 2, 3, 10, 17 and 20 are canceled. New claims 27-30 are added. Claims 1-26 are rejected.

Claims 1, 4, 5, 7, 9, 11, 14, 15, 18 and 19 are amended herein to clarify the invention, to broaden language as deemed appropriate and to address matters of form unrelated to substantive patentability issues. Specifically, independent claim 1 is amended to include the subject matter of claim 3 and claims 4, 5 and 12 are amended to be consistent with the changes to claim 1. Claims 7 is amended for clarification purposes. Independent claim 9 is amended to include the subject matter of claim 10. Independent claim 14 is amended to include the subject matter of claim 20 and claims 15, 18 and 19 are amended to consistent with the changes to claim 14. In view of the fact that the subject matter added to the independent claims was previously set forth in dependent claims considered by the Examiner, no new issues are raised.

Moreover, reconsideration of the finality of the Office Action is respectfully requested because the primary references cited in the final Office Action were first made of record in the final Office Action and the subject matter of the claims as amended by the first amendment is believed to have been set forth in the originally filed claims. As such, the changes to the claims should not have necessitated a final Office Action.

Claim Rejections-35 U.S.C. §102

Claims 1, 2, 4, 6-8, 12-17, 21 and 25 are rejected under 35 U.S.C. §102(b) or (e) as being anticipated by Burgess (U.S. Pat. No. 5,695,859) or Burgess (U.S. Pat. No. 5,828,289).

The Examiner's rejection is respectfully traversed in view of the changes to independent claims 1 and 14.

Independent claim 1 is amended to include the features of claim 3 so that it now specifies that the sensing element includes one pair of electrode plates arranged to contact or separate from each other according to the load and that the coating member includes a protrusion for limiting a position to which the load toward the sensing element is transmitted and which is shifted from both longitudinal ends of the electrode plates into a central side thereof. Further, claim 1 is amended to specify that the input apparatus includes a plurality of detection units arranged such that the operation member is supported at a plurality of points around an outer circumference thereof.

Independent claim 14 is amended to include the features of claim 20 so that it now specifies that the sensing element includes a pair of electrode plates arranged

to contact or separate from each other according to the load, and that the coating member includes a protrusion for limiting a position to which the load toward the sensing element is transmitted and which is spaced from both longitudinal ends of the electrode plates.

Burgess '859 and Burgess '289 do not disclose a plurality of detection units arranged such that an operation member is supported at a plurality of points around an outer circumference thereof (independent claim 1) and a coating member which includes a protrusion (independent claims 1 and 14) and therefore cannot anticipate the embodiments of the invention set forth in these claims or in the claims which depend therefrom.

The embodiment shown in Fig. 15 of the Burgess references shows a lever device 200 which is designed to eliminate a dead-zone at an edge of the mat switch 130 by transferring the force applied at the edge to a central portion of the mat switch 130. Similarly, the embodiment shown in Fig. 16 shows a T-shaped portion 211 between two mat switches 130 which eliminates a dead-zone between the mat switches 130.

In contrast to the embodiment of the invention set forth in claim 1, the operation member of Burgess is not “supported” at a plurality of points around an outer circumference. The Examiner considered the lever 200 of Fig. 15 to constitute an operation member. As is clear from the specification at col. 11, lines 37-41, the lever 200 is not in contact with the detection unit (mat switch 130) in the absence of a downward force on the arm 202 of the lever 200. Thus, the detection unit cannot be said to support the operation member at a plurality of points around an outer circumference. It is pointed out that claim 9 as previously set forth recited that the coating member is arranged to support the operation member by contacting the operation member (amended for clarification purposes to the coating member being arranged to support and contact the operation member). Such contact between the coating member and the operation member is absent in the systems of Burgess.

With respect to the protrusion set forth in claims 1 and 14, the Examiner considered ribs 131e of the mat switch 130 of Burgess ‘859 and Burgess ‘289 to constitute a protrusion. However, in contrast to the claimed embodiments, ribs 131e do not limit the position to which the load toward the sensing element (electrodes 132, 135 as considered by the Examiner) is transmitted. As set forth at col. 11, lines 9-11 of Burgess ‘289, the ribs 131e enable the cover portion 131b of the mat switch 130 to be depressed at least a distance equal to the height of the ribs.

This is a minimum permitted distance but does not correspond in any manner to a limitation, i.e., an imposed maximum, on the permitted depression of the cover portion 131b.

In view of the changes to claims 1 and 14 and the arguments presented above, it is respectfully submitted that the Examiner's rejection of claims 1, 2, 4, 6-8, 12-17, 21 and 25 under 35 U.S.C. §102(b) or (e) as being anticipated by Burgess '859 or Burgess '289 has been overcome and should be removed.

Claim Rejections-35 U.S.C. §103

Claims 9, 10, 19, 20, 22, 23 and 26 are rejected under 35 U.S.C. §103(a) as being unpatentable over Burgess '859 or Burgess '289 in view of Hector et al. (U.S. Pat. No. 4,720,789) and applicant's admitted prior art.

Claim 9 is amended to include the features of claim 10 and thus now recites that the input apparatus comprises a plurality of detection units arranged such that an operation member is supported at a plurality of points around an outer circumference thereof and a plurality of stoppers each for limiting an amount of pushing operation toward the operation member and arranged inward of the detection units.

Burgess '859, Burgess '289, Hector et al. and applicant's admitted prior art do not individually disclose or teach in combination an input apparatus for a game system including a plurality of detection units which support an operation member at a plurality of points around an outer circumference thereof.

In contrast to the embodiment of the invention set forth in claim 9, the operation member of Burgess is not "supported" at a plurality of points around an outer circumference. The Examiner considered the lever 200 of Fig. 15 to constitute an operation member. However, the lever 200 is not in contact with the mat switch 130 in the absence of a downward force on the arm 202 of the lever 200. Thus, the detection unit cannot be said to support the operation member at a plurality of points around an outer circumference. Such contact between the coating member and the operation member is absent in the systems of Burgess.

In further contrast to the embodiment of the invention set forth in claim 9, the systems of Burgess do not include a stopper arranged inward of each detection unit to limit movement of the operation member. Rather, as considered by the Examiner, the stoppers of Burgess (struts 137) are arranged inside of the mat switches and not arranged inward of the detection units. An advantage of arranging the stoppers inward of the detection units is that the stopper becomes a supporting



point after the operation member contacts the stopper (the upper diagram in Annex A). By contrast, when the stopper is arranged outward of the detection unit, the stopper does not stop the load from being applied to the detection unit (the lower diagram in Annex A).

Hector et al. and the applicant's admitted prior art also do not disclose stoppers arranged inward of the detection units which support an operation member around an outer circumference thereof.

With respect to claims 19, 20, 22, 23 and 26, Hector et al. and the applicant's admitted prior art do not disclose a protrusion for limiting a position to which the load toward the sensing element is transmitted and which is spaced from both longitudinal ends of electrode plates, now set forth in independent claim 14 upon which claims 19, 20, 22, 23 and 26 depend. As this feature is not set forth in any of the cited prior art, one skilled in the art could not modify these references and arrive at the embodiments of the invention set forth in claims 19, 20, 22, 23 and 26.

In view of the changes to independent claims 9 and 14 and the arguments presented above, it is respectfully submitted that the Examiner's rejection of claims

9, 10, 19, 20, 22, 23 and 26 under 35 U.S.C. §103(a) as being unpatentable over Burgess '859 or Burgess '289 in view of Hector et al. and the applicant's admitted prior art has been overcome and should be removed.

Claims 3 and 20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Burgess '859 or Burgess '289 in view of Burgess (U.S. Pat. No. 6,114,645).

Claim 1 has been amended to include the subject matter of claim 3 and claim 14 has been amended to include the subject matter of claim 20.

In contrast to the embodiments of the invention now set forth in claims 1 and 14, Burgess '645 does not teach or suggest an input apparatus for a game system including a detection unit having a coating member including a protrusion for limiting a position to which the load toward the sensing element is transmitted and which is shifted from both longitudinal ends of electrode plates of a sensing element of the detection unit. As discussed above, Burgess '289 and Burgess '859 also do not disclose this feature.

In view of the absence of all of the features of original claims 3 and 20 from the cited prior art, one skilled in the art could not have combine any purported

teachings of the cited prior art and arrived at the embodiments of the invention now set forth in claims 1 and 14.

In view of the changes to independent claims 1 and 14 and the arguments presented above, it is respectfully submitted that the Examiner's rejection of claims 3 and 20 under 35 U.S.C. §103(a) as being unpatentable over Burgess '859 or Burgess '289 in view of Burgess '645 has been overcome and should be removed.

Claims 5 and 18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Burgess '859 or Burgess '289 in view of Saur et al. (U.S. Pat. No. 6,110,073).

The Examiner's rejection is respectfully traversed on the grounds that Saur et al. does not disclose protrusions arranged on an inner surface of a coating member. The Examiner referred to Figs. 2 and 7. As shown therein, Saur et al. includes foot pads 18 which have air channels 66 recessed into the underside of the foot pads 18. The air channels 66 do not constitute protrusions as in the claimed embodiments of the invention which are effective to limit the position to which the load toward a sensing element is transmitted.

In view of the absence of all of the features of original claims 5 and 18 from the cited prior art, one skilled in the art could not have combine any purported teachings of the cited prior art and arrived at the embodiments of the invention now set forth in claims 5 and 18.

In view of the changes to independent claims 1 and 14 and the arguments presented above, it is respectfully submitted that the Examiner's rejection of claims 5 and 18 under 35 U.S.C. §103(a) as being unpatentable over Burgess '859 or Burgess '289 in view of Saur et al. has been overcome and should be removed.

It is noted that claim 11 is not rejected in view of prior art. Clarification of the status of claim 11 is therefore requested in the next communication.

#### New Claims

Claims 27-30 are added. Claim 27 is directed to subject matter previously set forth in claim 11. Claim 28 is a new independent claim which constitutes claim 7, as previously set forth, rewritten in independent form. Claims 29 and 30 depend from claim 27. Thus, claims 27-30 should not be deemed to raise new issues as the subject matter of these claims was previously considered by the Examiner.

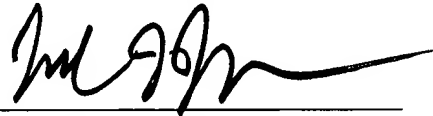
One independent claim in excess of three is added. Accordingly, please charge the fee of \$84.00 to Deposit Account No. 10-1250.

In light of the foregoing, the application is now believed to be in proper form for allowance of all claims and notice to that effect is earnestly solicited. Please charge any deficiency or credit any overpayment to Deposit Account No. 10-1250.

Respectfully submitted,

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By



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enc: Annex A

Amended Claims with Amendments Indicated Therein  
by Brackets and Underlining

**APPENDIX I****AMENDED CLAIMS WITH AMENDMENTS INDICATED THEREIN  
BY BRACKETS AND UNDERLINING**

1. (Twice Amended) An input apparatus for game systems comprising:

an operation member adapted to receive a load; and

a plurality of detection [unit] units arranged such that said operation member is supported at a plurality of points around an outer circumference thereof, each of said detection units being capable of outputting a predetermined detection signal in response to changes in load in a predetermined direction in relation to said operation member,

each of said detection [unit] units including a sensing element and a coating member made of elastic material, said coating member coating said sensing element and functioning as a medium to transmit the load applied to said operation member to said sensing element,

said sensing element including one pair of electrode plates arranged to contact or separate from each other according to the load.

said coating member including a protrusion for limiting a position to which the load toward said sensing element is transmitted, said protrusion being shifted from both longitudinal ends of said electrode plates into a central side thereof.

said coating member being arranged to contact said operation member and support said operation member in the predetermined direction.

4. (Twice Amended) The input apparatus of claim [2 or 3] 1, wherein said protrusion is arranged on an outer surface of said coating member.

5. (Twice Amended) The input apparatus of claim [2 or 3] 1, wherein said protrusion is arranged on an inner surface of said coating member.

7. (Twice Amended) The input apparatus of claim 6, wherein [at least an outer surface portion of] said operation member is formed into a panel, [said detection unit being arranged to contact said outer surface portion of said operation member,] and said stopper is located closer to a center of said operation member than [that of] said detection unit.

9. (Twice Amended) An input apparatus for game systems comprising:

a base having a plurality of panel-attaching sections;

an operation member arranged at each of said panel-attaching sections and adapted to receive a load;

a plurality of detection units arranged at each of said panel-attaching sections such that said operation member is supported at a plurality of points around an outer circumference thereof;

a plurality of stoppers for limiting an amount of pushing operation toward said operation member,

said stoppers being arranged inward compared to said plurality of detection unit,

[a] each of said detection [unit] units being located between a panel-supporting surface formed on each of said panel-attaching sections and said operation member and being capable of outputting a predetermined detection signal in response to changes in pushing load applied to said operation member,

each of said detection [unit] units including a sensing element and a coating member made of elastic material, said coating member coating said sensing element and functioning as a medium to transmit the load applied to said operation member to said sensing element,



said coating member being arranged to contact said operation member and support said operation member [by contacting said operation member].

11. (Twice Amended) The input apparatus of claim 1 [or 9], wherein said operation member is a foot panel on which a player is able to stamp.

12. (Amended) The input apparatus of claim 1, wherein said [sensing element comprises] electrode plates comprise a pair of opposed metallic plates and said sensing element further comprises insulating means for separating said metallic plates from one another, said coating member being arranged to overlie an upper one of said metallic plates and lie below a lower one of said metallic plates.

14. (Amended) A foot switch for an input apparatus for game systems comprising:

a frame defining a support surface;

at least one detection unit arranged on said support surface of said frame and to output a detection signal in response to changes in a load applied in a predetermined direction, each of said at least one detection unit comprising a sensing element and a coating member made of elastic and surrounding said sensing element, said sensing element including a pair of electrode plates arranged to

contact or separate from each other according to the load, and said coating member including a protrusion for limiting a position to which the load toward said sensing element is transmitted, said protrusion being spaced from both longitudinal ends of said electrode plates; and

an operation member adapted to receive a load and arranged in contact with said coating member of said at least one detection unit such that said coating member supports said operation member on said frame and transmits the load received by said operation member to said sensing element.

15. (Amended) The foot switch of claim 14, wherein said [sensing element comprises] electrode plates comprise a pair of opposed metallic plates and said sensing element further comprises insulating means for separating said metallic plates from one another, said coating member being arranged to overlie an upper one of said metallic plates and lie below a lower one of said metallic plates.

18. (Amended) The foot switch of claim [17] 14, wherein said protrusion is arranged on at least one of an outer surface and an inner surface of said coating member.

19. (Amended) The foot switch of claim [17] 14, wherein said coating member is elongate and said protrusion extends longitudinally along said coating member, said protrusion being spaced from longitudinal ends of said coating member.



# ANNEX A

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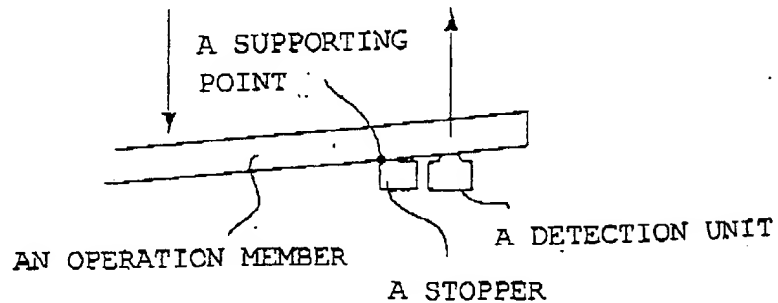
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## A CASE OF A STOPPER LOCATED INWARD

TECHNOLOGY CENTER R3700

THE PUSHING LOAD  
TOWARD THE OPERATION MEMBER

THE LOAD DIRECTION  
AFTER CONTACTING TO THE STOPPER



## A CASE OF A STOPPER LOCATED OUTWARD

THE PUSHING LOAD  
TOWARD THE OPERATION MEMBER

